



List of Affected Jurisdictions

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Project Descriptions

M2 Motorway

*Roads and Traffic Authority of
New South Wales*

Sydney, Australia

\$2 billion



Description

M2 is a 14-mile radial motorway servicing Sydney's northwestern suburbs – one of the fastest growing urban areas in Australia.

The motorway features a parallel, twin-tube, mined tunnel and carries approximately 75,000 vehicles per day on a four-lane cross-section, including dedicated bicycle facilities and in-line bus transit services.

M2 forms part of Sydney's Orbital Road Network and will link directly to WestLink M7, a motorway that is currently being constructed by a consortium (including Transurban) and will be operated by Transurban when it opens in December 2005.

Transurban successfully acquired 100 percent of the US\$2 billion M2 in June 2005, five months after announcing its intent to acquire the motorway. The rapid and effective merger of Transurban and Hills Motorway Group – the listed vehicle that owned the M2 – reflects an understanding by Transurban investors of the synergy benefits that can be gained by managing more than one asset, as well as their confidence in Transurban's ability to maintain a smooth flow of traffic at increased levels through the active management of motorways.

Immediately after assuming management of M2, Transurban began working with the Roads & Traffic Authority of New South Wales (RTA) on developing ways to better integrate the motorway into the surrounding motorway network.

Similarities

- Development of tolling solution to best integrate with local network
- Financial capacity to fund immediate improvements that will offer long-term benefits
- Systems development and operations
- Community outreach and communications program
- Successful partnership with local road authority
- Operation of managed lanes within overall road network
- Phased implementation of tolling upgrades to minimize disruption

064.AI

M2 Motorway

Within the next two years, two new, fully-electronic tolled motorways – WestLink M7 and the Lane Cove Tunnel – will open at both ends of the M2. Therefore, Transurban is being proactive by investigating the expansion of fully electronic tolling on the M2.

Transurban has plans in place to perform this activity by using a phased approach to replace the existing system based on cash plaza operations and expects the enhancements to deliver immediate benefits to motorists and the community.

The introduction of fully electronic, distance-based tolling on M2 is also being investigated by Transurban and the RTA with a view toward creating one free-flowing corridor when WestLink M7, Sydney's first fully electronic distance-based motorway, opens next year.

By upgrading the tolling configuration on the M2, Transurban will be able to significantly improve the road network by providing a better-integrated level of service to a wider range of customers and offer a smoother, more efficient driving experience for motorists.

Transurban is the only motorway owner/operator to manage more than one road tunnel system in Australia. By 2006, when WestLink M7 connects with the M2, Transurban will be performing tolling and customer service operations on more than 50 percent of Sydney's motorway network (39 miles) with the vision of setting a new benchmark for customer-friendly service and a free-flowing, on-road experience.

WestLink M7

*Roads and Traffic Authority of
New South Wales*

Sydney, Australia

\$1.7 billion

Description

WestLink M7 is Transurban's first toll road development in New South Wales and the first in Australia's largest city of Sydney. With over 4 million residents Sydney is a modern and successful metropolis that requires a transportation system to support its future development.

WestLink M7 is located in Western Sydney, the third largest, and the fastest growing, economy in Australia. The 25-mile road will link three tolled motorways – the M5 at Prestons, the M4 at Eastern Creek, and the M2 at West Baulkham Hills.

Transurban has a 40 percent equity stake in this \$1.7 billion project and will construct and operate the full electronic tolling and customer service system. Our equity partners are Macquarie Infrastructure Group (40 percent), Leighton Contractors (10 percent) and Abigroup Contractors (10 percent).

Major construction is now well underway and includes 17 interchanges, 38 overpasses and underpasses, 146 bridges, and more than 25 miles of shared pedestrian/cycleway path. When it is completed in December 2005, WestLink M7 will allow motorists to bypass up to 56 sets of traffic lights and save up to an hour on some journeys.

WestLink M7 customers will only pay for the distance traveled. This is very different from Sydney's existing toll roads, where you pay a flat toll regardless of how far you travel. Westlink M7 will be the second all-electronic



toll road in Australia and the largest in Sydney. For this project Transurban has redefined its proprietary GATe tolling/customer service central system to accommodate the specific requirements of customers in the Western Sydney. Transurban expects to distribute over 400,000 transponders to customers by the end of the first year of operations.

WestLink M7 will also be a major catalyst for further economic development in Western Sydney, linking the 75,000 businesses to the port and the airport.

According to the Greater Western Sydney Economic Development Board, WestLink M7 will generate an additional 24,000 jobs in Western Sydney and an additional \$2.1 billion in economic output during the first three years of operations.

Similarities

- Private investment in project
- Intra-urban relief tollroad
- Systems development and operations
- All electronic tolling and customer management systems
- Successful partnership with local road authority
- Operation of tollroad within overall road network

065.AI

CityLink

Department of Infrastructure

Melbourne, Australia

\$1.7 billion

Description

Transurban was formed in 1996 to develop and own the Melbourne CityLink. The project involved construction of a 13-mile motorway with two long tunnels, a major bridge, and an elevated roadway through Melbourne's western suburbs. The project was funded with U.S. \$375 million of equity (provided by Transurban) and U.S. \$1.3 billion of debt.

In 1998, Transurban stepped into systems development and operating roles when the project encountered difficulties with third-party implementation contracts. CityLink successfully opened in January 2000, and is arguably the world's most effective deployment of a fully electronic (open road) tolling system. The challenges of implementing the system were numerous—most significantly, it had to accommodate more than 650,000 potential customers (both frequent and casual) and handle nearly as many transactions per day, quickly and with pinpoint accuracy.

The success of the project is demonstrated by the following operating statistics:

- Traffic is within 4 percent of the forecast made in 1996
- More than 1.2 million vehicles are registered to use CityLink



- More than 800,000 toll transactions are processed each weekday
- More than 900,000 transponders are in the marketplace, including 300,000 issued prior to the first tolling date
- Approximately 3,000 new accounts are opened every week
- 87 percent of transactions are electronic, with the remainder being video based

CityLink has become a testing ground for new technologies and innovation in the development and delivery of tolling products and services. More than 50 delegations from around the world have come to Melbourne to study the project.

Similarities

- Business model requirements (intra-urban relief toll road)
- All electronic tolling and customer management systems
- Successful partnership with local road authority
- Operation of tollroad within overall road network

062.AI

Tender for Share Capital

Autostrade

Italy

\$12 billion

Description

Autostrade is the leading Italian toll road operator with a network of 2118 miles representing 61 percent of Italy's toll motorways (3475 miles) and 53 percent of the 4030-mile motorway network in Italy.



In 2002, Goldman Sachs played a key role in structuring a highly innovative package for NewCo28's acquisition of Autostrade and provided the largest commitment of \$3.325 billion. The debt financing was

initially launched in November 2002 but encountered a certain degree of resistance for two key reasons:

- Large size for a leveraged buyout loan was beyond capacity in the bank markets; and
- Longer than usual tenor at 16 years (subsequently reduced to 12 years).



Goldman Sachs was invited into the transaction in mid-December 2002 and in less than a week it offered a commitment for close to \$6 billion to facilitate the tender. The committed amount was subsequently scaled back to \$3.325 billion, by the borrower, with five other banks committing \$1.800 billion each and on Christmas Eve the six banks underwrote the \$12.296 billion loan for the tender.

Similarities

- Acquisition financing
- Optimized financing to suit the revenue and capital expenditure profile of the asset
- High-quality toll road asset with traffic and maintenance history
- Essential infrastructure within the regional transportation grid

071.AI

Pocahontas Parkway – Route 895 Connector

*Virginia Department of
Transportation*

Henrico County, Virginia

\$324 million



Description

Fluor led the joint venture responsible for the financing, design, and construction of the Pocahontas Parkway (Route 895) connecting southern Chesterfield and eastern Henrico counties in Richmond, Virginia. The parkway's signature high-level river crossing, the Vietnam Veterans Memorial Bridge, allows ocean-going ships access to the Port of Richmond's Deepwater Terminal.

Fluor used a public-private partnership approach for the Route 895 Connector, which is the first capital project under The Commonwealth of Virginia Public-Private Transportation Act of 1995. This legislation allows for innovative financing, including tax-free bond financing, of projects on which private developers and the state collaborate.

During the three-year development period, Fluor raised private capital funding and employed an innovative use of tax-exempt bond financing to bring the budgeted \$324 million project to reality while fostering local support and obtaining agency clearances.

The 8.8-mile, 4-lane, limited-access, divided highway includes interchanges with Interstates 95 and 295, a 200-meter clear-span, cast-in-place bridge over the James River, smaller bridges, and toll facilities. The toll system uses the Smart Tag AVI technology being established throughout the Northeast. The Virginia Department of Transportation (VDOT) owns, maintains, and operates the Pocahontas Parkway.

Project activities included utility relocations, wetland mitigation, right-of-way property acquisition, and permitting, in addition to design and construction. Construction began in 1998 with site staffing peaking at 600 workers. The eastbound lanes opened May 2002, and the westbound lanes four months later.

The Pocahontas Parkway was completed \$10 million under budget. Virginia provided \$27 million of the total project budget with the remaining funds from the private sector.

Similarities

- PPTA development
- Innovative use of tax-exempt bonds
- Interstate highway design-build
- Right-of-way acquisition
- Project financial plan development
- First open-road toll system in Virginia
- Use of Smart Tag AVI technology

096.AI

SH 130

*Texas Department of
Transportation*

Austin, Texas

\$1.3 billion



Description

Fluor is the lead company in the Lone Star Infrastructure (LSI) consortium selected by the Texas Department of Transportation (TxDOT) to design, build, and maintain State Highway 130 (SH 130). The 90-mile toll road will extend east of IH-35 from Georgetown to IH-10 near Seguin, relieving congestion on IH-35 and other major roadways in the Austin-San Antonio corridor.

SH 130 represents the single largest highway project in Texas and the largest design-build transportation project in the United States. This \$1.3 billion toll facility will include 177 structures, 7 major interchanges, and 7.6 million square yards of concrete paving. The ultimate design for SH 130 includes three mainlines of travel in both north- and south-bound directions with three-lane frontage roads. The alignment and proposed median width have been designed to accommodate future transportation needs such as general multipurpose lanes, high occupancy vehicle (HOV) facilities, and light rail transit.

SH 130 is the first state highway project in Texas to be built under a Comprehensive Development Agreement, allowing property acquisition, design, and construction to be undertaken simultaneously by one consortium. Fluor interfaces directly with TxDOT and oversees project administration, design, constructions, and maintenance activities. Under Fluor's oversight, LSI has developed procedures for coordinating activities among the many project functions to produce a unified design.

Construction on the northern 49 miles from Georgetown south to the Austin-Bergstrom International Airport is expected to complete by the end of 2007. As additional funding and right-of-way become available, the remaining two southern segments will be completed.

Similarities

- Comprehensive Development Agreement
- Financing facilitation
- Design-build-maintain
- Right-of-way acquisition
- Toll facility
- Designed to accommodate future transportation needs
- Phased openings

095.A1

Conway Bypass

*South Carolina Department of
Transportation*

Horry County, South Carolina

\$386 million

Description

Fluor provided fast-track design and construction services for a 28.5-mile controlled-access highway around the traffic congestion caused by the city of Conway. Culminating from teamwork among government agencies, private industry, and local communities, the \$386 million Conway Bypass is the first major public-private partnership project to be constructed in South Carolina. The bypass is also the first project funded by the State Infrastructure Bank (SIB) established by the South Carolina General Assembly.

The Conway Bypass stretches from Highway 501, 6 miles north of Conway, to North Myrtle Beach, South Carolina. The roadway varies from four to six lanes in width, with provisions for widening the entire length to six lanes, and includes five major interchanges. Seventeen mainline bridges span wetlands, railway, and the Waccamaw River.

The project scope included numerous bridges over wetland areas making up 9.85 miles of the approximately 28-mile roadway. By working closely with state and federal agencies, Fluor identified minimally productive wetlands that allowed the elimination of approximately 5 miles of bridges resulting in a \$50 million reduction in total project cost.



The new road, officially named Veterans Highway, opened May 2001, seven months ahead of schedule and under budget despite the disruption of three hurricanes and attention to sensitive environmental issues requiring special construction methods. Top-down bridge construction used pre-cast components and temporary trestles for heavy cranes to cross over work corridors avoiding contact with wetlands and eliminating building access roads through sensitive areas.

The project achieved 2.6 million hours without a single lost-time accident. This record ranks it as one of the safest major transportation projects in the United States.

Similarities

- Interstate highway design-build
- Program management
- Environmental sensitivity and mitigation
- Railroad/highway structures
- Construction adjacent to vehicular traffic

097.AI

Dulles Toll Road 4th Lane Widening, Bus Slip Ramps, and Capital Beltway Interchange Improvements

Virginia Department of Transportation

Fairfax County, Virginia

\$63 million



Description

Jacobs has been the Engineer-of-Record for both the Virginia Department of Transportation and Fairfax County Department of Public Works (DPW) for all improvements on the Dulles Toll Road since 1994. The company performed design and prepared metric right-of-way and construction plans for the \$55 million, 13 miles of HOV lanes and the \$4.6 million interchange modifications for the Dulles Toll Road interchange at the Capital Beltway for the Virginia Department of Transportation. Jacobs also designed the slip ramps access for the express bus system for the Fairfax County DPW.

4th Lane HOV Widening

Services included surveying, mapping; special studies for VDOT to prepare environmental documents; traffic engineering; highway design and right-of-way and construction plans; widening and deck overlay of seven existing bridges; retaining wall and sound barrier design and construction plans; traffic signal design and construction plans; plans for maintenance of traffic during construction; signing and striping plans; construction staging; and community and agency coordination.

The widening of Wiehle Avenue over the Dulles Toll Road was included as a separate construction contract. Wiehle Avenue was widened to improve operations of the interchange with the Dulles Toll Road and to increase traffic capacity. Three-through lanes in each direction were provided on Wiehle Avenue between Sunrise Valley Drive and Sunset Hills Road; dual turn lanes to and from the Dulles Toll Road were also provided. The bridge carrying Wiehle Avenue over the Dulles Toll Road was widened from 3 to 10 lanes and included a complete deck replacement.

Similarities

- Dulles Toll Road improvements
- Capacity improvements of cross roads
- Principal arterial highway design
- Widening/lane addition
- Close proximity to airport
- Bridges/structures
- Protection of adjacent communities
- Urban area

061.AI

Dulles Toll Road 4th Lane Widening, Bus Slip Ramps, and Capital Beltway Interchange Improvements

Aesthetic enhancements to the bridge and corridor were also included. These enhancements were closely coordinated with the Reston Land Development Corporation and VDOT to form the gateway to the town of Reston, Virginia.

One of the widened bridges included dual simple-span, composite beam structures supported by stub abutments on steel piles over Centreville Road. Widening the stub abutments, located behind full height mechanically stabilized earth system walls, presented a unique challenge because of the interference of the wall reinforcing strips at the proposed pile locations. An innovative approach in design was required to maintain the integrity of the wall during and after the placement of the new piles.

Jacobs prepared a Transportation Study for the future Dulles Rail System. A four-member project team prepared and presented a feasibility study to determine the locations of six future rail stations to be placed along the median.

Bus Slip Ramps

The slip ramps provide access to the express bus system from the Dulles Toll Road to and from the Dulles Airport Access Highway to decrease travel times for commuters traveling to the Metro.



the exclusive use of express bus service in the Dulles Corridor. Each slip ramp included automated gate technology that allows access for express buses.

The project included the design services and preliminary and final plans for six bus slip ramps for

The slip ramps were strategically placed to provide access from transit centers, such as the Herndon Monroe Park and Ride, to the Dulles Corridor. Each slip ramp is approximately 3380 feet long. Also provided were drainage structures and a median barrier as part of Jacobs' design.

The use of express bus service was one of the first steps taken by the county to promote mass transit in the corridor, increase transit ridership with the express bus service, and prepare commuters and the community for a future rail system within the Dulles Airport Access Highway median.

Interchange Improvements at the Capital Beltway

Jacobs performed roadway, drainage, signing, and pavement marking design, attended public meetings, and prepared complete right-of-way and construction plans for this project. Work on the Capital Beltway project included developing field inspection plans through to final construction plans.

Improvements to the Dulles Toll Road ramps at Capital Beltway included widening the Southbound Capital Beltway Ramp to the Westbound Dulles Toll Road and the Eastbound Dulles Toll Road Ramp to Northbound Capital Beltway.



Previously, Jacobs completed a feasibility study for VDOT that reviewed several alternatives for each ramp and coordinated with VDOT to select the preferred alternative for each ramp.

Chesapeake Bay Bridge Tunnel

Chesapeake Bay Bridge and Tunnel District

Virginia Beach to Cape Charles, Virginia

\$460 million

Description

Having received worldwide attention, the Chesapeake Bay Bridge Tunnel is a United States engineering marvel. This important east coast link joining the Delmarva Peninsula and southeastern Virginia crosses over and under open waters at the mouth of the Atlantic Ocean, reducing the trip between these localities by 95 miles.

Since the 1950s, Jacobs has worked continuously in partnership with the Chesapeake Bay Bridge Tunnel District to plan, design, construct, and maintain the original landmark 17.5-mile-long crossing and later the parallel crossing. Jacobs provided planning, design, and construction management services for the first Chesapeake Bay Bridge and Tunnel Crossing. In 1990, the firm was selected to provide environmental planning, design, and construction management services for a second parallel crossing to provide an additional two lanes plus shoulders. Throughout this period, Jacobs has served as General Engineering Consultant providing annual inspection and rehabilitation services for the original crossing.

The bridge network consists of 12 miles of pre-stressed pre-cast concrete trestles and two high-level bridges. There is also a 9,000-foot-long earthfill causeway. Key to inspection is the necessity to maintain full structural integrity of structures (trestles, bridges and portal islands) located in treacherous open seas. Trestle structures are built on pre-stressed concrete cylinder piles designed to withstand 20-foot waves and 10-foot storm surges. Elements also include pre-stressed concrete deck sections and pre-cast concrete pile caps.

Jacobs was responsible for construction supervision, inspection, and managing construction contracts exceeding \$460 million in value. Jacobs helped

formulate the project budget and was responsible for controlling extra work and change orders. Soils consultants were retained for constructing the islands and for pile-driving.

Key crossing features are two mile-long tunnels beneath strategically important navigational channels, with the portals for each tunnel ending on man-made islands. The first tunnel is the Thimble Shoals Tunnel, which is 5,738 feet long, providing for a 1,900-foot channel with minimum 50-foot depth. The second is the 5,400-foot-long Chesapeake Channel Tunnel, which provides for a 1,700-foot channel with 50-foot depth, and a 2,300 channel with 40-foot ft depth. Maximum roadway grade in the tunnels is 4 percent.

Today, as the Engineer-of-Record, Jacobs continues to provide consultant services including inspection and overseeing maintenance for the Chesapeake Bay Bridge and Tunnel District on an annual basis.

Similarities

- Bridge/toll facilities
- Principal arterial highway
- Widening/lane additions
- Retaining walls
- Cost estimating
- Competitive processes
- Economic development



060.A1

Pocahontas Parkway – Route 895 Connector

Virginia Department of Transportation

Henrico County, Virginia

\$324 million



Description

As the prime designer, Jacobs provided complete preliminary and final engineering services and roadway and bridge plans for a 4.6-mile section of Route 895 Connector valued at \$50 million. Under a challenging design schedule and sensitive funding structure, Jacobs provided surveys, utility relocation design, bridge plans, road plans, complete right-of-way and construction plans, signing, lighting, and pavement marking plans for this design-build project. The project required appropriate third-party approvals of VDOT, Virginia Marine Resources Commission, Virginia Department of Conservation and Recreation, as well as local counties and other stakeholders.

US Route 895 connects Route 150/I-95 in Chesterfield County to I-295 in Henrico County. The mainline is a four-lane divided highway with shoulders on both sides. Within these limits, the highway crosses several existing facilities, including New Market Road (Route 5), Wilson Road, Darbytown Road, Monahan Road, Britton Road, and two structures at I-295. Jacobs designed these five grade separation structures.

Jacobs initiated this project under a design-bid-build contract with VDOT. Before transitioning to the Public-Private Transportation Act (PPTA) design-build contract, Jacobs developed and evaluated alternative alignments/interchanges; prepared cost estimates for each alternative; prepared, and participated in public information meetings, hearings, and field reviews; assisted in finalizing the selection of improvements; and prepared design hearing presentation material.

The project was set up as a toll-based, nonrecourse financing structure. Sensitivity to the project budget required Jacobs to design the project to cost and drove the schedule as well. Jacobs accelerated the project schedule, so that revenue production was possible sooner than expected.

Similarities

- Design-build subcontractor to Fluor
- Principal arterial highway
- Widening/lane additions
- Close proximity to airport
- Bridges/structures
- Financial risk sharing
- Competitive processes
- Economic development

066.AI

Virginia Interstates – I-95, I-77, I-81, and I-381

*Virginia Department of
Transportation*

Commonwealth of Virginia

\$302 million



Description

VMS is responsible for the operations, management and restoration programs on 25 percent of the Commonwealth of Virginia's interstate highway system. Contract duration is 10 years.

The outcomes-based asset management project encompasses 1,262 lane miles of roadway on four interstate highways, which are maintained under a variety of weather and traffic conditions. The work includes routine and preventive maintenance and restoration work such as roadway resurfacing. VMS performs the full range of maintenance services on each project, including snow removal and emergency response, and is required to meet the established performance standards.

VMS monitors local and national weather services in advance of storms to determine probability,



timing, and form of precipitation. VMS puts subcontractors on alert for the approaching storm and assures inventories of sand, salt and liquid de-icing chemicals are readily available. Forecasts are reviewed to determine if any type of liquid anti-icing should be applied to the roadways to prevent freezing.

VMS dispatches inspectors to drive the roads and identify any initial precipitation and potentially hazardous conditions. As the weather event unfolds, subcontractors follow a pre-determined route and pattern, while VMS staff updates road conditions, and attends to any incident response requests from VDOT or Virginia State Police, through VDOT's Smart Traffic Center. VMS also updates the VDOT VOIS Web site.

Similarities

- Principal transportation corridor
- Operational and maintenance responsibilities
- Bridges and structures
- Capital pavement program
- Competitive process
- Emergency response and incident management

068.AI

Miami-Dade Expressway

Miami-Dade Expressway Authority

Miami-Dade, Florida

\$13 million

Description

VMS is operating and maintaining more than 170 lane miles of expressways and the associated facilities in the Greater Miami area on S.R. 836, 874, 878, 112 and 924 under an asset Management contract with the Miami-Dade Expressway Authority (MDX). Contract duration is 7 years.



The contract includes fence-to-fence routine and preventive maintenance of roadway assets, including

landscaping, as well as maintenance and repair of toll facilities and the administrative building. VMS is also responsible for bridge inspection and incident/emergency response including hurricanes.

On the VMS Miami-Dade Expressway project, a vehicle struck and demolished a toll booth. VMS

immediately dispatched its Incident Response Team to assist the Florida Highway Patrol with traffic control and cleanup.



The VMS Team response was so efficient that a new fully operational toll booth was in place within 48 hours.

Similarities

- Principal transportation corridor
- Operational and maintenance responsibilities
- Bridges and structures
- Competitive process
- Emergency response and incident management

067.AI

Space Coast

*Florida Department of
Transportation*

**Volusia, Flagler, Brevard, and
Indian River Counties, Florida**

\$72 million



Description

VMS provides routine and preventive maintenance on roadways and facilities along I-95 in Volusia, Flagler, Brevard and Indian River Counties as well as sections of S.R. 401, 407 and 528. Contract length is 14 years.

Project assets that VMS maintains for the Florida DOT include: 188 centerline miles, four rest areas and two weigh stations.

VMS is responsible for the repair or replacement of infrastructure assets within the corridor damaged by accident or weather, as well as traffic management and emergency response. VMS also manages bridge inspection, permit management, and compliance services along these corridors.

Similarities

- Principal transportation corridor
- Operational and maintenance responsibilities
- Bridges and structures
- Capital pavement program
- Competitive process
- Emergency response and incident management

072.AI



Capital Beltway Improvement Study

Virginia Department of Transportation

Fairfax County, Virginia

\$900 million (2010 construction cost)



Description

Parsons was retained by the Virginia Department of Transportation (VDOT) to conduct several phases of project development studies for improvements to the Capital Beltway in Northern Virginia. Studies included a Major Investment Study (MIS) completed in January 1997, a Draft Environmental Impact Statement (DEIS) completed in March 2002; an Environmental Reevaluation Report in March 2005, and a Final Environmental Impact Statement (FEIS) estimated to be completed in December 2005.

During the MIS phase of the project, Parsons defined the corridor transportation problem, developed a range of potential solutions, formulated screening criteria, conducted a multi-level alternatives evaluation process, identified environmental constraints, and compiled extensive public and agency coordination materials. Parsons also developed the overall study methodologies to allow coordination with an independent MIS for the Maryland portion of the Capital Beltway and for other ongoing transportation studies in the region.

During the second phase of the project, preliminary engineering and environmental impact analyses for improvements to the 14-mile section of the Beltway between Springfield Interchange and the American Legion Bridge were conducted. Fourteen mainline concepts including 10- and 12-lane options were evaluated and several concepts for improvements to each of the ten interchanges were developed and analyzed. A Draft EIS was prepared to document the analyses and provide detailed traffic, engineering and environmental data on the three Candidate Build Alternatives. Following a series of public hearings, the

scale of the alternatives was reduced in response to comments from the general public and local government. Recommendations for the inclusion of High Occupancy Toll (HOT) lanes were also incorporated into the new alternatives. The revised alternatives were presented at another series of public information meetings and documented in an Environmental Reevaluation Report. The Commonwealth Transportation Board selected a 12-Lane Alternative with HOT Lanes as the preferred alternative. A Final EIS documenting the Board's selection as well as providing responses to all comments on the draft document is currently being prepared by Parsons.

As part of the public involvement program, Parsons established a telephone hotline and e-mail address; developed a database to maintain a mailing list as well as track hotline calls and public comments; created and maintained a project web site that included detailed project information, including technical documents and maps of the alternatives; developed project newsletters and informational brochures; conducted more than 25 public information meetings and hearings, as well as dozens of local briefings for interested community and stakeholder groups.

Similarities

- Environmental and transportation planning
- Multi-modal alternatives - highway and transit
- Agency coordination
- Client: Virginia Department of Transportation
- Northern Virginia highway network

030.AI

Dulles Corridor Rapid Transit Project

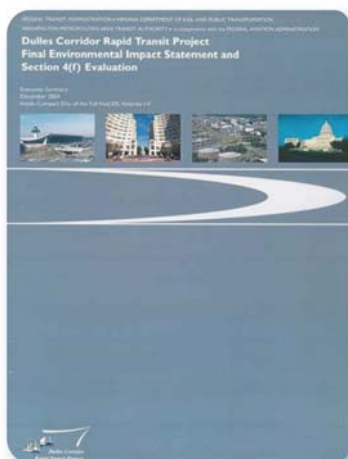
Virginia Department of Rail and Public Transportation

Fairfax and Loudoun Counties, Virginia

\$3.5 billion (2015 construction cost)

Description

As a lead consultant firm in the Capital Transit Consultants (CTC) consortium, Parsons provided engineering, planning and program management services to the Washington Metropolitan Area Transit Authority (WMATA) under sponsorship of the Virginia Department of Rail and Public Transportation (DRPT). One of CTC's major projects, the Dulles Corridor Rapid Transit Project, features plans to extend Metrorail service from the West Falls Church Station to Washington Dulles International Airport and beyond into Loudoun County – a total distance of 23.5 miles.



Parsons was the lead firm for engineering design services and also managed the environmental and planning services. A Draft Environmental Impact Statement (DEIS) was prepared that

examined a wide range of improvement alternatives within the Dulles Corridor, including enhanced bus service, bus rapid transit (BRT), and full Metrorail



service. After consideration of the various improvements, including comments received at a series of public hearings, a Locally Preferred Alternative was selected: extension of Metrorail service from the Orange Line through Tysons Corner to Dulles Airport and on to Route 772 in Loudoun County. This alternative would eventually be implemented in two phases. This decision as well as responses to several thousand comments was documented in a Final Environmental Impact Statement (FEIS)

Parsons staff played key roles in conducting the detailed environmental assessments; preparing the environmental documents; participating in numerous public participation activities; and coordinating the project with federal, state, and local government agencies.

Similarities

- Dulles Corridor
- Environmental and transportation planning
- NEPA documentation
- Agency coordination
- Client: Virginia DRPT / WMATA

I-66 Inside the Capital Beltway Feasibility Study (Idea 66)

Virginia Department of Transportation

Arlington and Fairfax Counties, Virginia

\$112 – \$233 million (2010 construction cost)



Description

Parsons completed a feasibility study for the Virginia Department of Transportation to assess adding a westbound lane on I-66 in the Washington, D.C. metropolitan area. I-66 serves as one of the primary access routes into Washington, D.C., and is located within a highly urbanized area in Arlington and Fairfax Counties in Virginia. The *Idea 66 Study* was complicated by a variety of factors; including previous commitments from USDOT that stated that the facility would never be widened, a complex mix of regional and local traffic using the facility, and various peak-period HOV, truck, and airport access restrictions in place on I-66.

The *Idea 66 Study* used a Context Sensitive Solutions approach to produce a series of feasible concepts for the corridor. The study included an extensive community outreach program, including stakeholder interviews, community planning workshops, facilitated planning sessions, and mass information campaigns. Technical elements of the *Idea 66 Study*

included a digital license plate survey, development of screening criteria, and multimodal travel demand modeling. The feasible concepts included widening concepts, express bus concepts, managed lane concepts and various spot improvement and management strategies. Concepts were evaluated against a wide variety of criteria including: environmental constraints, engineering feasibility, transportation benefits, costs and consistency with local transportation plans.

Similarities

- Environmental and transportation planning
- Multi-modal alternatives - highway and transit
- Agency coordination
- Client: Virginia Department of Transportation
- Northern Virginia highway network

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